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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,861	12/16/2003	Keiichi Taguchi	Q78357	3184
23373	7590	06/30/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			CHAU, MINH H	
			ART UNIT	PAPER NUMBER
			2854	

DATE MAILED: 06/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/735,861	Applicant(s) TAGUCHI ET AL.	
	Examiner Minh H. Chau	Art Unit 2854	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 December 2003.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☒ Claim(s) 8-12 is/are allowed.
6) ☒ Claim(s) 1-4, 7, 13, 16 and 18 is/are rejected.
7) ☒ Claim(s) 5, 6, 14, 15 and 17 is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☒ The drawing(s) filed on 16 December 2003 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/16/2003</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. **Claims 8-18** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There is insufficient antecedent basis for the following limitation:

In claim 8: Line 4, "second detection means", "third detection means"

In claim 12: Lines 5-6, "second through fourth detection positions"

In claim 13: Line 4, "fifth detection means", "sixth detection means"

In claim 18: Lines 5-8, "fifth detection means", "sixth detection means"

The above claims do not recite a first detection means (claims 8 and 12) or first, second, third and fourth detection means (claims 13 and 18), which creates confusion for the reader. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-4, 7, 13, 16 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Byeon et al. (US # 6,381,441).

With respect to **Claim 1**, Byeon et al. teach an image forming apparatus (Fig. 1) comprising a transportation means (feeding rollers in Fig. 1) which transports a sheet-like recording medium along a predetermined transportation path (54), first detection means (91) which outputs a predetermined first detection signal when the recording medium is located at a first detection position which is behind the transportation means in the transportation direction of transporting the recording medium; and jam judging means (col. 5) which measures the duration of the first detection signal, and based on a result of a comparison of the measurement result with a reference time which is set in accordance with the length of the recording medium along the transportation path, judges whether a jam of the recording medium has occurred (Figs. 1-4 and cols. 5-6).

With respect to **Claim 2**, see cols. 5-6 and Fig. 3 of Byeon et al. that teach a reference time corresponds to a period of time which the recording medium transported by the transportation means needs to move passed the first detection position normally.

With respect to **Claim 3**, see cols. 5, 7 and Fig. 3 of Byeon et al. that teach when the duration is shorter than the preset time or the reference time, said the judging means judges that the jam has occurred.

With respect to **Claim 4**, see cols. 4 and col. 6 of Byeon et al. that teach an image is capable of being formed on multiple types of the recording mediums whose sizes are different from each other, and the reference time is set in accordance with the size of the recording medium on the image is to be formed.

With respect to **Claim 7**, Byeon et al. teach a jam detecting method for use in an image forming apparatus (Fig. 1) comprising transportation means which is for transporting a sheet-like recording medium along a predetermined transportation path (54) the method comprising the steps of setting a reference time in accordance with the length of the recording medium along the transportation path (col. 6); measuring the duration of a first detection signal which first detection means, which is disposed at a first detection position which is behind the transportation means in the transportation direction of transporting the recording medium (col. 5), outputs when the recording medium is located at the first detection position; and comparing thus measured duration with the reference time (col. 7) and judging whether a jam of the recording medium has occurred based on the comparison result (see Figs. 1-4 and cols. 4-7 of Byeon et al.)

With respect to **Claims 13 and 18**, Byeon et al. teach an image forming apparatus and a jam detecting method comprising transportation means (62) which transports a sheet-like recording medium along a predetermined transportation path (54); fifth detection means (94) which outputs a fifth detection signal when a recording medium moves passed a fifth detection position which is behind the transportation means in the recording medium transportation direction; sixth detection means (95) which outputs a sixth detection signal when a recording medium moves passed a sixth detection position which is behind the fifth detection position in the recording medium transportation direction and jam judging means which judges that a jam of the recording medium has occurred, based on output signals from the fifth and the sixth detection means (see Figs. 1-3 and cols. 5-7 of Byeon et al.)

With respect to **Claim 16**, see cols. 5-6 and Fig. 3 of Byeon et al. that teach in the absence of the sixth detection signal (95) after a certain period of time or preset time, which has been set in advance in accordance with the distance or the gap between the fifth and the sixth detection positions, since the start of outputting of the fifth detection signal (94), the jam judging means judges that a jam of the recording medium has occurred.

Allowable Subject Matter

5. **Claims 5, 6, 14, 15 and 17** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten to overcome the 35 U.S.C. 112 rejection above and in independent form including all of the limitations of the base claim and any intervening claims.

Claims 8-12 are allowed.

6. The following is a statement of reasons for the indication of allowable subject matter and statement of reasons for allowance:

Claim 5 has been indicated for containing allowable subject matter because the prior art fails to teach the entire combination of an image forming apparatus including a length detection means which is disposed ahead of the transportation means on the transportation path and which detects the length of the recording medium along the transportation path and the reference time is set based on a detection result obtained by the length detection means.

Claims 6, 11 and 17 have been indicated for containing allowable subject matter because the prior art fails to teach the entire combination of an image forming apparatus including the transportation means is a fixing unit which fixes an unfixed image on the recording medium.

Claims 8-11 have been indicated for allowance because the prior art fails to teach the entire combination of an image forming apparatus including jam judging means which judges that a jam of the recording medium has occurred, when at least one of a first condition and a second condition below is satisfied: the first condition being a condition that during a period in which outputting of the second detection signal has been continuing since the start of the outputting of the second detection signal, outputting of the third detection signal has started, and during the same period, the outputting of the third detection signal ends, the second condition being a condition that during a period in which outputting of the third detection signal has been continuing since the start of the outputting of the third detection signal, outputting of the fourth detection signal has started, and during the same period, the outputting of the fourth detection signal ends.

Claim 12 has been indicated for allowance because the prior art fail to teach the entire combination of a jam detecting method for use in an image forming apparatus including the steps of judging that a jam of the recording medium has occurred, when at least one of a first condition and a second condition below is satisfied: the first condition being a condition that during continuous detection of the presence of the recording medium at the second detection position, the detection result at the third detection

position changes to one indicative the present of the recording medium from one indicative the absence of the recording medium, and then changes to one indicative the absence of the recording medium again, the second condition being a condition that during continuous detection of the presence of the recording medium at the third detection position, the detection result at the fourth detection position changes to one indicative the presence of the recording medium from one indicative the absence of the recording medium, and then changes to one indicative the absence of the recording medium again.

Claim 14 has been indicated for containing allowable subject matter because the prior art fails to teach the entire combination of an image forming apparatus including the gap between the fifth and sixth detection positions is shorter than the length of the recording medium in the recording medium transportation direction, and in the absence of the fifth detection signal during continuous outputting of the fifth detection signal since the start of the outputting of the fifth detection signal, the jam judging means judges that a jam of the recording medium has occurred.

Claim 15 has been indicated for containing allowable subject matter because the prior art fails to teach the entire combination of an image forming apparatus including the gap between the fifth and sixth detection positions is shorter than the length of the recording medium in the recording medium transportation direction and when outputting of the sixth detection signal has started during a period in which outputting of the fifth detection signal has been continuing since the start of the outputting of the fifth detection signal and when the outputting of the sixth detection signal has ended during

the same period, the jam judging means judges that a jam of the recording medium has occurred.

7. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Applicant's attention is invited to the patents to Rath (US # 5,970,274), Brewster, Jr. et al. (US # 5,639,171), Morishita et al. (US # 5,485,247), Kitagawa et al. (US # 4,307,957) and Yamaoka et al. (US # 4,084,900).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Minh H. Chau whose telephone number is (571) 272-2156. The examiner can normally be reached on M - TH 9:30AM - 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew H. Hirshfeld can be reached on (571) 272-2168. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.

Art Unit: 2854

Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MHC
27 June 2005


MINH CHAU
PRIMARY EXAMINER